

Cracklin' Static

DECEMBER 2019 Edition



Breakfast Meeting: Sat, December 7th

Boomtown Casino Hotel
Events Center
I-80 at Exit 4 in Verdi

Breakfast Buffet – 7:30am - \$12
General Meeting – 8:00am

This meeting will have the elections, a short presentation by Don W7SSB, and Barry K6ST will talk on youth involvement.

SNARS NET on DMR – Tuesday 8pm
DMR Talk Group: 31328 SNARS

SNARS Treasury Nov Closing Balances

Operating	\$6,611
Savings	\$9,206
Self Insurance	\$6,678
Convention	\$4,295
PayPal	\$878

Total	\$27,667
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Net Income (\$61)
YTD Income \$1,642
Renewals 14
PayPal Giving \$10

SNARS Membership – ending 11-30-19 SNARS Members total 378

Extra	131	35%
Technician	116	31%
General	114	30%
Advanced	13	3%

ARRL Members	251	66%
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President's Voice

President John Byerly, N7ROJ

Email: mtnlion@gmail.com



Happy December everyone! I hope your Thanksgiving was full of food, family, and friends!

I hope everyone got their station and antenna work done for the winter. It seems as if we are going to have an active one weather wise.

Electronic voting is going well, and the participation level is good. If you haven't voted yet, please ensure you do! If you have any questions, feel free to reach out to myself (mtnlion@gmail.com) or the board to ensure your voice is heard.

This upcoming meeting we will tally the votes, post them on the screen, and be calling for membership to ratify them by vote of the members in attendance. One of the major benefits is the results will be immediately available to us during the meeting.

Due to the meeting being on the anniversary of the attack on Pearl Harbor, we will be having a moment of silence in remembrance of those lost.

Keep warm and dry, and see you next Saturday!

73, John N7ROJ



PO BOX 7727 Reno NV 89510
 Yearly Dues: \$40.00 Individual • \$50.00 Family
 775.453.4142 <http://snars.org>

2019 Officers

President.....John Byerly, N7ROJ
 Vice-President.....Jim Shepherd, W6US
 Treasurer.....Bill Jones, AE7OX
 Secretary.....Anthony Marcin, W7XM
 DirectorWes Vick, KG7QXE
 DirectorJohn Miller N7JDM
 DirectorBarry Bettman, K6ST

2019 Staff

Cracklin Static..... Howie Holden, WB2AWQ
 W7TA Trustee Peter DeBay, KE7VSR
 KR7ENO Trustee Howie Holden, WB2AWQ
 Control Operator Pat Sheehan, W7DED
 Historian Jon Fox, KF7KTC
 Tech Team Lead Pat Sheehan, W7DED
 Membership..... Kim Farnham, KG7TMA
 PIO Greg Krantz, NT7Q
 VE Coordinator..... Bill Nichols, NN7K
 Meeting Greeter..... Bill Jones, AE7OX
 Noon Net Manager..... Wes Vick, KG7QXE
 DMR Net Manager Anthony Marcin, W7XM
 Reno Ham Swap Vacant
 Webmaster Erik Andreasen, K6CZH
 Club Sales Manager.....Julie Dodge, N7JWL
 Recording Secretary.....Doug Edmondo, W7DBE

Cracklin Static Publication

Editor: Howie Holden **WB2AWQ** - holden7471@msn.com
 Cracklin' Static is the Newsletter of, and sponsored by the Sierra Nevada Amateur Radio Society. Opinions expressed herein are those of the editors and contributors and should not be considered as official expressions of the Club Officers, Staff or Club Members, or as endorsements by same.

Material for publication may be edited to enhance readability or to save space. We reserve the right to use whatever font size, line spacing or other tools as may be required to publish this Newsletter. **Deadline for input to the newsletter is 1500 hours on the Sunday** prior to the 1st Saturday of each month.

SNARS Wide Area Linked System

147.030 + PL 123.0	Sparks, Fernley, Fallon	Online
147.210 + PL 100.0	Reno, Sparks	Online
147.150 + PL 123.0	Lake Tahoe, Truckee, Carson	Online
146.925 - PL 123.0	Lovelock, Fallon	Online
146.670 - PL 123.0	Winnemucca	Online
444.875 + PL 100.0	Yerington	Online
444.125 + PL 123.0	Reno Sparks	Offline

DMR Systems

444.925 + CC 1	Reno, Sparks	Online
444.825 + CC 1	Dayton, Fallon, Carson	Online
443.925 + CC 1	Lake Tahoe, Truckee, Carson	Online
443.950 + CC 1	Incline Village	Online
442.875 + CC 1	Sparks, Fernley, Fallon	Online
442.850 + CC 1	Downtown Reno	Online
441.950 + CC 1	Fallon, Fernley	Offline

Fusion Systems

146.610 - PL 123.0	Reno, Carson, Dayton	Online
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IRLP / EchoLink Systems

147.300 + PL 123.0	Reno, Sparks	Online
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Packet / APRS

145.050 - RNO	Reno, Carson, Dayton	Online
145.050 - ROSE	Lake Tahoe, Truckee, Carson	Online
144.390 - TOULON	Lovelock, Fallon	Online

Standalone Systems

147.390 + PL 100.0	Reno, Carson, Dayton	Online
443.075 + PL 123.0	Reno, Carson, Dayton	Online
927.0875 + PL 114.8	Reno, Carson, Dayton	Online



Online



Offline



Not Linked

Thank you to our Sponsors/Supporters



Weekday on the SNARS Linked System

147.030 + PL 123 – Sparks/Fernley
 147.150 + PL123.0 – Lake Tahoe / Truckee
 147.210 + PL 100.0 - Reno
 444.875 + PL 100.0 - Yerington
 146.925 - 123.0 – Lovelock / Fallon
 146.67 – PL 123.0 - Winnemucca

Monday through Friday @ 12:00pm

Open to all amateur radio operators. A general informational net for the amateur radio community of Northern Nevada and Eastern California. Radio Checks and Questions are welcomed.

Nets on the SNARS Linked Systems

147.210 + 100.0 | 147.030 + 123.0 | 147.150 + 123.0
 147.670 – 123.0 | 146.925 – 123.0 | 444.875 + 100.0

ERC Net for NV and Northern CA	Monday @ 9:15pm
N. Western NV ARES Net	Thursday at 7:30pm
Northern Nevada Preppers Net	Wednesday @ 8:00PM
Hospital Net	Friday @ 10:00AM

Nets on IRLP (GSR) System

Repeater: 147.300 + 123.0

Amateur Radio Newslite	Monday - 8:00PM
Nevada Skywarn Net	Wednesday - 7:00pm
Nevada State ARES Net	Thursday - 7:00PM

Nets on Simplex/HF

Jefferson Noon Net	7.204 LSB	Daily - 12:00pm
6 Meter Net	50.350 USB	Tuesday – 8:00pm
2 Meter Week Signal	144.250 USB	Wednesday - 8:00PM
2 Meter Simplex Net	146.500 FM	Thursday – 8:00PM
10 Meter Net	28.350 USB	Sunday – 2:00PM

SNARS Weekly DMR Net – Tuesdays
8:00PM

SNARS Talk Group 31328

Open to Members and Guests. A general information net each week on DMR.

SNARS CALENDAR

Ham Radio Night at the REOC Wednesday, December 4,
 6 PM Washoe REOC 5195 Spectrum Blvd, Reno NV

SKYWARN RECOGNITION DAY Saturday, December 7, 0000Z to 2400Z (Friday 4 PM to Saturday 4 PM PST) see page 8 for details

SNARS Board Meeting Wednesday December 11, 6 PM
 Chin-Chin 222 Los Altos Pkwy, Sparks NV

Reno QRP Monthly Meeting Mon, December 16, 11:30am – 12:30pm Alamo Casino Truck Stop in Sparks Contact Gordon WB6JAD for more information

Radio Exams - ARRL Sat, December 21, 9am – 12pm Washoe REOC 5195 Spectrum Blvd, Reno NV visit <http://snars.org/exams> for full details

Next SNARS Breakfast Meeting – Saturday January 4,
8 AM Boomtown Casino Hotel Events Center I-80 at Exit 4 Verdi

WELCOME NEW MEMBERS

November, 2019

Mike	Sorensen	KG7WKL
John	Noyes	KJ7IXG
Louis	Van Blarigan	KN6FFT
Matt	Caviglia	KG7LYH
Michael	Whitten	KI7NIP
Farshad	Meshkati	KJ7JXJ
Raina	Sobiloff	KI7SGF
Blake	Sobiloff	N6BNS
John	Cline	KI7JSV
Tracy	Hoobyar	KJ7JXG
Jim	Kjeldsen	KJ7JXE
Ariel	Lacanilao	KJ7JXH
Rob	Steel	KJ7JXK
Vince	Adams	KD7TWW
Brian	Verhalen	KJ6EAC

THE NAME OF THE GAME

Jim Shepherd, W6US nvjims@gmail.com

NEW, INEXPENSIVE TEST GEAR

In the past couple of years, there has been a tremendous increase of small pieces of digital readout test equipment. Items that were well beyond most ham's budgets are suddenly available for bargain basement prices.

Vector Network Analyzers could be had for \$10,000+, and not much cheaper on the used market. A couple of years ago someone came out with a VNA box that you could hook to your computer for about \$900 that generated some interest, but earlier this year, a \$50 portable unit, the NanoVNA appeared on the scene. These units can be used to improve antennas, tune filters and duplexers, calibrate attenuators and preamps, and even find faults in transmission lines and connectors. Owners of these units with access to the \$10k units are finding them in very close agreement with each other. There has been some software developed that allows the use of computers and Android devices for a larger display and control of these units. They are available from a number of sources mostly from Southeast Asia. The design is open source and there are lots of clones. You will want to make sure it comes with a battery, calibration 'standards', and a couple of SMA cables and a USB cable which is also used to charge the battery. This unit will work from about 100kHz to 1.5GHz...

Looking for a frequency meter to measure the outputs of your various oscillators? For the princely sum of about \$15 you can get one that is good up to 500mHz. It will measure signals from about -10dBm up to a quarter watt, so you will need an appropriate attenuator or signal sampler T to look at your transmitters. Just adding a rubber ducky to its SMA connector will work for a handheld radio a few feet away. Mine was about 100Hz off when it arrived, but it can be easily recalibrated. Just add a 9 volt battery and you are in business. Go to Banggood.com and use their search function for 1102706

You may have a Bird or Telewave RF power meter to handle the high power measurements, but when you get in the realm of the sub-QRP power levels that don't even wiggle the needle on the big meters, you need something better. You can find used meters for relatively low prices, however, you need a sensor for them, and they are getting rare and priced accordingly. If you need something to measure power between -75 and +16 dBm (power under ¼ watt), Banggood's 1221705 RF Power Meter is a good choice for \$26. It runs on 9Vdc and can help you with chores like setting the power output of a low power driver for a transverter for the microwave frequencies. With the proper attenuators, this can be used with higher power signals.

If you need to build something with capacitors in the picoFarad range or inductors in the microHenry size, you will need the capability to measure these components. Banggood's 105681 LC100-A meter is just the ticket. One feature I really like is the ability to zero the

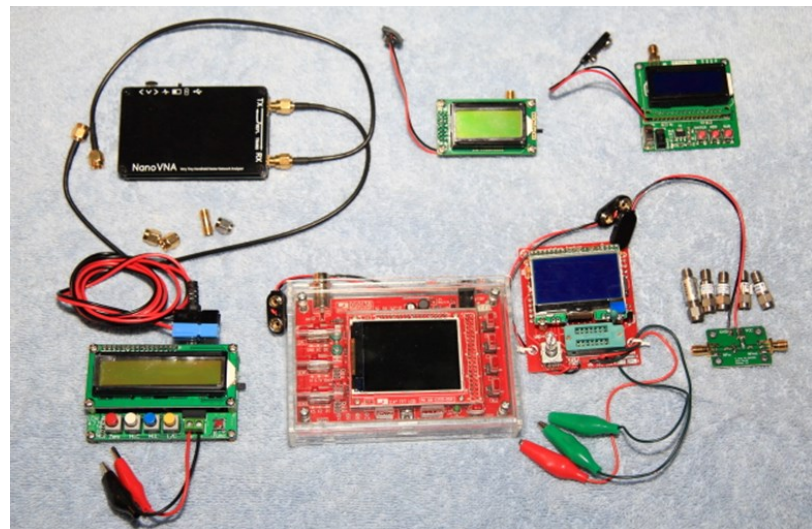
effect of the test leads or a part holding jig. It only costs \$14 but be aware it runs on 5Vdc power. It has a USB connector that can be used to power it, but it also has a coaxial jack that is the same size as most 12V connectors on other ham gear, and you do not want to hit it with the higher voltage.

The DSO138 series oscilloscopes have been around for a few years now, and for about \$20, they are a great tool. They run on a 9Vdc battery and can fit in your pocket. They are available from a number of sources, and it is Banggood number 1051616. These come as a kit with all the surface mount parts pre-soldered and the rest of the parts are all through-hole mounted and are easily soldered by you.

There are a number of transistor checkers out there and they all seem to find some of the key parameters. Some of them will check other components as well. They will usually cost less than \$20. Look for one with a 'zero insertion force' socket to hold the legs of the components and test leads for items that don't fit the socket.

Some of these pieces of test gear can be overloaded and damaged by connection across the output of even a QRP rig. A selection of attenuators can help reduce the power to safe levels. Likewise, some signals are too weak to register, and a MMIC low noise amplifier, like the Banggood 1211372, can boost signals by about 30 dB. Maximum output is 10 mW when fed with a -20 dBm signal. These versatile amps are under \$8.

These and other little items can really add some capabilities to your electronics bench. There are others on Ebay, Amazon, and outfits like Banggood that may be useful in your situation. These units are replacing equipment that used to cost more than top-of-the-line ham transceivers with ones that will make good stocking stuffers.



Clockwise from upper Left: NanoVNA with cables and standards; RF Frequency Meter; Low Power RF Power Meter; 30 dB Low Noise Amplifier with Attenuators; Transistor Tester; Digital Storage Oscilloscope; LC Tester

SNARS LOGO ITEMS

This year we are celebrating our 50th year by providing many ways to commemorate this occasion by imprinting our 50th



Stickers \$1.00 Each



16oz Coffee Mugs \$8.00



Hats \$10.00



Club Badge \$15.00

Order at
<http://snars.org/store/badge-order>

Items are available at the monthly meetings, events or online (coming soon) <http://snars.org/store>

MIKE'S MISSIVES CHAPTER FORTY SEVEN

Mike Katz, N7MSK

DX CODE OF CONDUCT

I know in every large group there are probably going to be a few bad apples which even a code of conduct will not cure. However, for the rest of us the DX Code of Conduct provides a list of "good" operating practices which will not only improve our DXing success but will make it much more enjoyable working DX..

Here is the code: Give it thought and practice the good practice when you are working DX.....

- ◆ I will listen, and listen, and then listen again before calling.
- ◆ I will only call if I can copy the DX station properly.
- ◆ I will not trust the DX cluster and will be sure of the DX station's call sign before calling.
- ◆ I will not interfere with the DX station nor anyone calling and will never tune up on the DX frequency or in the QSY slot.
- ◆ I will wait for the DX station to end a contact before I call.
- ◆ I will always send my full call sign.
- ◆ I will call and then listen for a reasonable interval. I will not call continuously.
- ◆ I will not transmit when the DX operator calls another call sign, not mine.
- ◆ I will not transmit when the DX operator queries a call sign not like mine.
- ◆ I will not transmit when the DX station requests geographic areas other than mine.
- ◆ When the DX operator calls me, I will not repeat my call sign unless I think he has copied it incorrectly.
- ◆ I will be thankful if and when I do make a contact.
- ◆ I will respect my fellow hams and conduct myself so as to earn their respect.



Editor's note: Also adhere to the DX station instruction to respond up or down in frequency. Make SURE your radio is set to the proper TX shift BEFORE transmitting!

This copy and commentary of the DX Code came from: <https://kc9qq.com/dx-code-coduct/> The DX Code was originally written by Randy Johnson W6SJ

NAME THAT RIG

(Answer on page 8)



Yeah I know it's not a radio, but it's very pertinent to our hobby!

W7SSB's FUN STUFF

(Editor's note: The following was taken from the AmateurRadio.com website. Don thought this was most appropriate at this time of the year, I concur!)

AmateurRadio.com



[A Christmas Story – Shep style!](#)



23 December 2014 | by [Larry W2LJ](#)

Undoubtedly, most of you are familiar with and may have watched (many times!) the movie "A Christmas Story".



I am hoping that all of you (or at least MOST of you) know that this story was written by one of the most famous Amateur Radio celebrities - Jean Shepherd K2ORS (SK - call re-issued). What you may not know, is that this story originally appeared as only one chapter in Jean's book, "In God We Trust, All Other's Pay Cash". The story was also published in Playboy magazine (of all places!) under the title "Duel In The Snow, Or, Red Ryder Nails the Cleveland Street Kid".

Shep, as he was affectionately known, had a long running radio program on WOR-AM radio in NYC when I was a kid. If I remember correctly, it began at 10:00 PM, so we had to listen to it clandestinely, with our trusty transistor radios tucked under our pillows with the earphone running to our ears - as this was way past our appointed bed time. On Christmas Eve of 1974 (when I was a teenager and could listen with no bedtime repercussions), Shep gifted his audience with a reading of this hilarious Holiday tale. Here it is for you to listen to - commercials and all!

I hope you enjoy it as much as I do!

Link: <https://www.youtube.com/watch?v=GkicEleOiTM>

Another holiday link from Don:

https://www.youtube.com/watch?v=c_9REVC4dtc

Everyone have a Merry Christmas and best for the New Year !

From Don W7SSB

FUN STUFF FOR DECEMBER

Contests for December are a little thin. Some of the better December contests are listed below. Those in **BOLD** are ARRL or NCJ sponsored, and may qualify for the Gavel Award. See <http://www.arrl.org/files/file/Contest%20Corral/2019/November%202019%20Corral.pdf> for a complete list of contests.

6 Dec 2200 to 8 Dec 1600 1.8 ARRL 160-Meter Contest CW
www.arrl.org/160-meter

7 Dec 1800 to 8 Dec 2359 3.5-28 FT8 Roundup Dig
www.rttycontesting.com

14 Dec 0000 to 15 Dec 2359 28 ARRL 10-Meter Contest CW Ph
www.arrl.org/10-meter

22 Dec 1800 to 22 Dec 2359 3.5-28 ARRL Rookie Roundup, CW
www.arrl.org/rookie-roundup

28 Dec 0000 to 28 Dec 2359 1.8-144 RAC Winter Contest CW Ph
wp.rac.ca

28 Dec 1500 to 29 Dec 1500 1.8 Stew Perry Topband Challenge CW
www.kkn.net/stew

If you're not into contests, there's always DX to chase! Due to the holidays, December's good stuff is a little thin, like the contests. Some of the better DX operations coming up in December:

Nov 26 to Dec 28 **Ghana 9G5GS**

Nov 28 to Dec 13 **Gambia C56PIS**

Dec 02 to Dec 09 **Micronesia V6K**

Dec 02 to Dec 20 **Burkina Faso XT2AW**

Dec 10 to Dec 23 **Maldives 8Q7XY**

Dec 13 to Dec 15 **Senegal 6V1A**

Dec 14 to Jan 08 **Thailand HS0ZNR**

There's more too! Check out: <https://www.ng3k.com/Misc/adxo.html>

2019 SKYWARN™ RECOGNITION DAY

December 7, 2019 from 0000z to 2400z

SKYWARN™ Recognition Day was developed in 1999 by the National Weather Service and the American Radio Relay League. It celebrates the contributions that volunteer SKYWARN™ radio operators make to the National Weather Service. During the day SKYWARN™ operators visit NWS offices and contact other radio operators across the world.

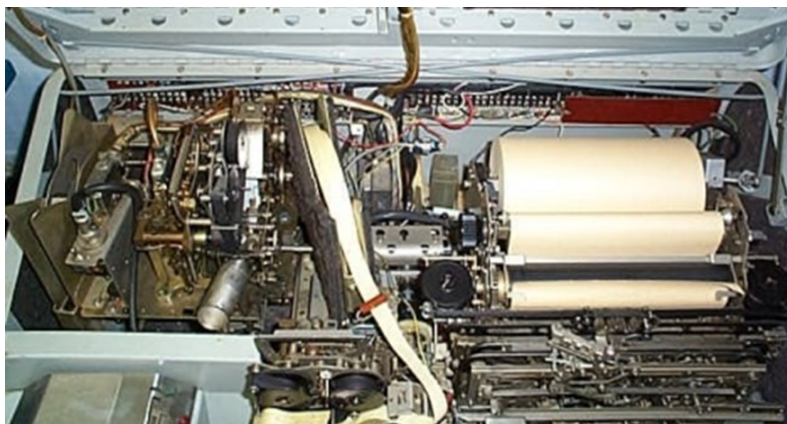
Object For all amateur stations to exchange QSO information with as many National Weather Service Stations as possible on 80, 40, 20, 15,

10, 6, and 2 meter bands plus the 70 centimeter band. Contacts via repeaters are permitted. SKYWARN™ Recognition Day serves to celebrate the contributions to public safety made by amateur radio operators during threatening weather.

See: <http://www.arrl.org/skywarn-recognition-day> for full details

NAME THAT RIG (from page 6)

The model **15KSR teletype machine** made by the **Teletype Corporation** was many a hams' intro to the world of RTTY back in the day. Made from the early 1930s into the 1950s, the **15KSR** (Keyboard Send and Receive) was used extensively by the US Military in WW2 and beyond, and when more modern models came out, the 15KSR found homes in Ham shacks and MARS stations. With a model **15KSR**, a receiver, transmitter, and a modulator/demodulator (modem), Joe Ham could send and receive RTTY. The model 15 ran 60 WPM (45 Baud). This is where the RTTY surge in Amateur Radio began. You can thank the 15KSR - and others like it - for PSK, FT8, etc. Teletype machines ran on a 32 bit system - each character was formed of 5 marks and/or spaces, and each character was preceded by a start function and ended by a stop function, and most keys on a teletype machine handled both letters and figures or punctuation, depending on which state (figs or ltrs) the machine was in, determined by one of the keys on the keyboard. The mechanics in all, but especially in early teletype machines was daunting, and any communications facility had to have competent technicians on site to repair and maintain them. For a fascinating video on teletype machine operation, visit: <https://www.youtube.com/watch?v=Ml00ngVwrcU> Watch the whole video to see the innards in action.

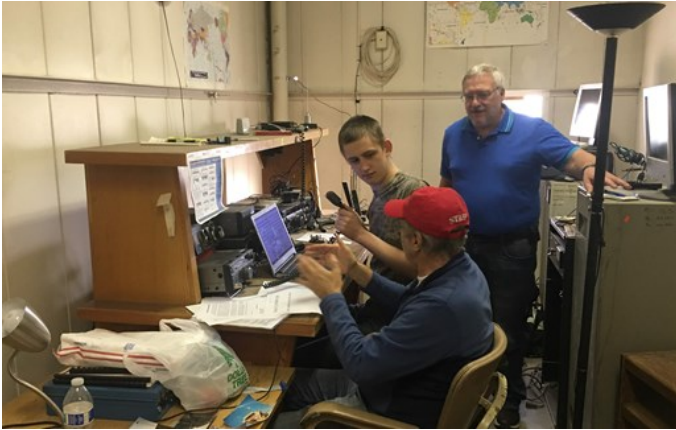


The "works" of a more modern teletype machine, the model **28ASR**, which was in wide use in both military and business in the 50s, 60s, and 70s. The 28ASR could receive, either from an outside signal source such as from a radio and TTY converter, or from a paper tape. In the receive mode it could generate either a paper tape copy or a hard copy. It could transmit either from the keyboard, or again from a paper tape. The electrical portion of a teletype machine, while complicated, is nothing compared to the mechanical.

YOUTH INVOLVEMENT

UNR Amateur Radio Club youth on campus activates W7URN for ARRL Sweepstakes SSB Contest November 16, 2019

We all packed into the windowless room, plugging in the power supply and radio both of which had not been used in a while. The radio a Kenwood TS450 came to life, and we all settled into our chairs. Barry Bettman (K6ST), ARRL Nevada Section Youth Coordinator, gave us a 30 minute brief of what was in store. We were bringing the UNR Station W7UNR back to life, taking part in the ARRL Sweepstakes contest.



Barry gave an overview of the calling protocol and what to say, as well as the different section names we would encounter: PAC, MDC, NTX, etc. and why section names help to simplify contests. We settled in and Barry rotated the knob waiting to hear someone's call, explaining that there are two approaches to contesting; Search and Pounce going from station to station looking to hear others calling CQ, and Running which is Calling CQ yourself. Barry stated that there are benefits to both and you choose your strategy based on your equipment, simply put with our 100watt system and poor antenna it would be better to search and pounce as our signal later proved to be a bit spotty.



This was fun to watch as he logged a few contacts, then abruptly put myself Nathan (KN6FFU) in the hot seat and

said go for it. Guiding me through turning the dial to find clarity and timing the interjecting into the mix, I quickly gained hold of what to do amassing 4 contacts in a matter of minutes. As a new Ham having only had on contact prior over Echolink this experience was priceless. He then put Ed Boog (KJ7DHY) on the radio and he worked quite a few more contacts. And then the best part he put Morgan (up and coming ham) in the seat. Morgan had learned fast and by the time he picked up the microphone he was ready. The first few contacts were challenging for him as he needed to remember what to say but then it became easy. Morgan wanted to try running so at the end there we ran for a bit calling CQ, no luck, but it was fun.



This was such a great way to get into Amateur radio, by contesting and doing the procedural things over and over. It was astounding the distance of the contacts we made. We made contacts in: the Pacific, Alaska, Maryland-DC, North Carolina, Connecticut, New Hampshire, Kansas, Nebraska, Missouri, North Texas, and Minnesota. It was great making contacts with other hams across the country. We are really looking forward to bringing the UNR Ham radio club back to life with the help of some hams.

Photo Credit: Dr. Rod Case (KD7QXO)

Nathan (KN6FFU) UNR Amateur Radio Club

ARRL KIDS DAY - January 4th, 2020

<http://www.arrl.org/kids-day>

Kids Day is designed to give on-the-air experience to young people and hopefully foster interest in getting a license of their own. It is also intended to give older hams a chance to share their station and love for Amateur Radio with their children.

(Continued on pg 10.....)

VOTE!

The final call for voting in annual election of SNARS Board of Directors is fast approaching. The polls will officially close on December 7th, at 8 AM sharp. You should have gotten an electronic invitation to vote, via email, which contains all the candidates and their bios, and instructions on how to vote. The process is easy and fast. If you haven't voted, do so by 8 AM on December 7th. If you did not get an email, contact the club President, John Byerly N7ROJ at mtnlion@gmail.com. To see more about the Board of Directors, visit: <https://snars.org/about/board/>

YOUTH INVOLVEMENT continued

About Kids Day

Twice a year, ARRL offers an event designed to promote Amateur Radio to our youth. Share the excitement with your kids or grandkids, a Scout troop, a church or the general public!



This year 2019 SNARS started the year off with Kids Day at Cabela's. Now one year later, we are ready to do the same, on Saturday, January 4th, 2020 right after the monthly SNARS breakfast meeting. The Sierra Nevada Amateur Radio Society is in the process of obtaining the same location (if possible) at Cabela's at 10a, Kids Days from 10:30a - 2:30.

This is a club effort and we would love to have many members come out and engage the kids into ham radio. **If you would like to participant, please contact K6ST Barry** k6st@arrl.net

73,

Barry K6ST
Nevada Section Youth Coordinator
ARRL (American Radio Relay League) arrl.org

COMING TO A RADIO NEAR YOU ARRL STRAIGHT KEY NIGHT 2020

From 0000Z January 1 to 1359Z January 1 Amateurs the world over are encouraged to break out their straight keys and bugs, and make friendly contacts on the Amateur bands. Visit: <http://www.arrl.org/straight-key-night>



**A British GPO
Postal key**

Many Amateurs will also be using vintage equipment along with the straight keys or bugs.

TECH COMMITTEE UPDATE



SNARS REPEATER STATUS - *As of December 2019*

After recent storms, most of the SNARS mountaintop sites are now inaccessible for the winter. At this time, all repeaters and links appear to be functioning normally. The 147.300 Grand Sierra repeater could possibly see the IRLP computer get installed over Christmas, if time permits.

If there are any questions regarding any of the sites, feel free to contact me at w7ded@sbcglobal.net.

Wishing everyone the warmest Season's Greetings!

73,

Pat, W7DED

SHORT TAKES

HAM RADIO NIGHT

First Wednesday, December 4, 2019, REOC 6pm Discussions on test equipment and its uses with ham radio. Will have a variety of gear and some items to test. Also will be available to help answer any questions about Ham Radio. There may be some DMR programming help available at that time.

CONTEST CALENDAR

Some interesting contests are popping up in November. It starts this weekend with the Top Band (160 meter) contest. For those of you who have 160m CW capability, this is a good time to put some contacts in the log. Full rules can be found at <http://www.arrl.org/160-meter>

For those of you who are into the FT8/FT4 modes, the FT Roundup is also this weekend. Using the digital modes, the object of this contest is to make contacts with as many other stations in as many different states and countries as possible. For more information see

<https://www.rttycontesting.com/ft8-roundup/rules/>

The biggest 10 meter Phone and CW contest of the year is the ARRL 10 Meter Contest. With the sunspots near their low, this could be a little slow, but there will be a lot of folks out there calling CQ, so if there is an opening, it will be heard. Complete rules are at <http://www.arrl.org/160-meter>

The results have been posted for the NVQSO Party at <http://nvqso.com/> We had about a 50% increase in logs sent in this year. Scores were much higher for all contestants thanks to about 60 Nevada hams that participated!

DX

There are some interesting ones on the air at this time. 9G5GS will be on in Ghana most of the month. C56BR will be in Gambia the first half of the month. HB0/DL2SBY will activate Liechtenstein around Christmas. There are lots of other stations and more can be found at <https://www.ng3k.com/Misc/adxo.html>

ARES NEWS

ANNUAL COMMUNICATIONS EVENTS CALENDAR 2020: Carson Valley, Tahoe, Reno, Plumas Co.

EVENT 2019	DATE	DATE END	SPONSOR/ORGANIZER	COORDINATOR	CONTACT
Silver State 50/50 race	5/16/20		Silver State Striders	Steve KS6A	ks6a@sbcglobal.net
Indian Valley Century Bicycle Ride	5/24/20		Plumas ARC	Larry Trotter KI6YUK	dltrtrotter@sbcglobal.net
Pony Express Re-Ride	6/3/2020	6/13/20	SIERA	Jeff Cauhape K7BCV	j_cauhape@yahoo.com
Lost and Found Gravel Grinder SBTS	6/6/20		Plumas ARC	Larry Trotter KI6YUK	dltrtrotter@sbcglobal.net
America's Most Beautiful Bike Ride	6/7/20		Tahoe Amateur Radio Assn	Paul Gulbro, WA6EWV	wa6ewv@juno.com
Truckee Dirt Fondo Bike Ride	6/13/20		John Prouty; Bike Monkey	Bob Miller WA6MTY	wa6mtty@gbis.com
Alta Alpina Challenge	6/27/20		Alta Alpina Cycling Club	Jennie Hamiter, KE7YBA	jenniehamiter@mac.com
Death Ride	7/11/20		Tahoe Amateur Radio Assn	Paul Gulbro, WA6EWV	wa6ewv@juno.com
Tahoe Rim Trail	7/17/20	7/19/19	Tahoe Mountain Milers	Bob Miller WA6MTY	wa6mtty@gbis.com
Running With the Bears	8/15/20		Plumas ARC	Larry Trotter KI6YUK	dltrtrotter@sbcglobal.net
Vegas to Reno Off Road Race	8/12/20	8/15/19	Best in the Desert Racing Assn	Keith KC7HTK	kc7htkeith@hotmail.com
Tour De Tahoe	9/13/20		Tahoe Amateur Radio Assn	Paul Gulbro, WA6EWV	wa6ewv@juno.com
Reno Air-Races	9/16/20	9/20/19	WC-ARES	Bob Miller WA6MTY	wa6mtty@gbis.com
Edible Pedal 100	9/20/20		Sunrise Rotary Club	Bob Miller WA6MTY	wa6mtty@gbis.com
Bear Growl Gravel Grinder	9/12/20		Plumas ARC	KJ6CUG	dltrtrotter@sbcglobal.net
Stetina Paydirt	9/19/20		John Prouty; Bike Monkey	Bob Miller WA6MTY	wa6mtty@gbis.com
Grinduro SBTS	TBD		Plumas ARC	Larry Trotter KI6YUK	dltrtrotter@sbcglobal.net
Nevada Day Parade	10/31/20		NV AREA NW DEC	John Abrott KD7NHC	jabrott77@gmail.com , cell 775 790-1739
Turkey Trot	11/26/20		WC-ARES	Bob Miller WA6MTY	wa6mtty@gbis.com

NOTE: Plumas ARC always have a need for operators. Go over to some beautiful country and help out the Plumas Amateur Radio Club

This frequency chart is what we use from the National Weather Service when NWS activates SKYWARN. With our severe thunderstorms these are the frequencies we will use. There is a SKYWARN Class scheduled for Friday at NVCON.



WCARES®



COUNTY	MEMORY	REPEATER	PL	NOTES:
Alpine, Ca	13	147.330	123.0	Leviathan, Minden, Carson, Alpine Co
	4	146.940	123.0	Snow Valley Pk Covers S&E Reno, Washoe, Carson, Minden, and
	10	147.240	100.0	Heavenly Valley Heavenly Vly, Most Lake, into Sacramento
	11	147.270	123.0	McClellan Pk Covers Carson, Douglas, Dayton, Silver Springs
	2	146.865	123.0	Leviathan Covers Alpine and Douglas
Churchill	7	147.150	123.0	Mt Rose Covers S Reno, Washoe, Carson, Douglas, S&W Lake Tahoe
	9	147.210	100.0	Peavine Pk
	6	147.030	123.0	Virginia Pk Mt Rose System
	8	147.180	107.2	Virginia Pk Covers Reno, Spanish Springs, Churchill Co, Gerlach, Black
	5	146.970	100.0	Eagle Covers Silver Springs and Fallon
Carson City	1	146.610	123	Ophir Pk (Dayton, Stagecoach, Silver Springs, Fallon, Lovelock)
	4	146.940	123	Snow Valley Pk Covers S&E Reno, Washoe, Carson, Minden, and
	14	147.390	123.0	Ophir Pk (Dayton, Stagecoach, Silver Springs, Fallon, Lovelock)
	11	147.270	123.0	McClellan Pk Covers Carson, Douglas, Dayton, Silver Springs
Douglas	13	147.330	123.0	Leviathan Pk, Minden, Carson, Alpine Co
	11	147.270	123.0	McClellan Pk Covers Carson, Douglas, Dayton, Silver Springs
	10	147.240	123.0	Heavenly Valley Pk Heavenly Vly, Most Lake, into Sacramento
	2	146.865	123.0	Leviathan Covers Alpine and Douglas
Eldorado, Ca	10	147.240	123.0	Heavenly Valley Pk Heavenly Vly, Most Lake, into Sacramento
Lassen, Ca	8	147.180	107.2	Covers Reno, Spanish Springs, Churchill Co, Gerlach, Black Rock, Susanville (scratchy)
Lyon	5	146.970	100.0	Lahontan (Silver Springs, Fallon)
	1	146.610	123.0	Ophir Pk (Dayton, Stagecoach, Silver Springs, Fallon, Lovelock)
	7	147.150	123.0	Mt Rose (Silver Springs, Yerington, Smith Valley)
Mineral				
Modoc, Ca				
Mono, Ca				
Nevada, Ca	7	147.150	123	Mt Rose Covers S Reno, Washoe, Carson, Douglas, S&W Lake Tahoe
Pershing	6	147.030	123	Virginia Pk Mt Rose System
	8	147.180	107.2	Virginia Pk

Pershing	6	147.030	123	Virginia Pk Mt Rose System
	8	147.180	107.2	Virginia Pk
Placer, Ca	10	147.240	123	Heavenly Valley Pk Heavenly Vly, Most Lake, into Sacramento
Plumas, Ca	7	147.150	123	Mt Rose Covers S Reno, Washoe, Carson, Douglas,S&W Lake Tahoe
	9	147.210	100	Peavine Pk
Sierra, Ca	7	147.150	123	Mt Rose Covers S Reno, Washoe, Carson, Douglas,S&W Lake Tahoe
	13	147.330	123	Leviathan Pk, Minden, Carson, Alpine Co
Storey	7	147.150	123	Mt Rose Covers S Reno, Washoe, Carson, Douglas, S&W Lake Tahoe
	9	147.210	100	Peavine Pk
	6	147.030	123	Virginia Pk Mt Rose System
	8	147.180	107.2	Virginia Pk
	1	146.610	123	Ophir Pk (Dayton, Stagecoach, Silver Springs, Fallon, Lovelock)
	14	147.390	123	Ophir Pk (Dayton, Stagecoach, Silver Springs, Fallon, Lovelock)
		146.850	123	Storey County ARES
Washoe	7	147.150	123	Mt Rose Covers S Reno, Washoe, Carson, Douglas,S&W Lake Tahoe
	9	147.210	100	Peavine Pk
	6	147.030	123	Virginia Pk Mt Rose System
	8	147.180	107.2	Virginia Pk
	1	146.610	123	Ophir Pk (Dayton, Stagecoach, Silver Springs, Fallon, Lovelock)
	14	147.390	123	Ophir Pk (Dayton, Stagecoach, Silver Springs, Fallon, Lovelock)
EchoLink and IRLP	3	146.895	100	KA7ZAU Peavine Pk (Node #357948 (#73 to clear #15 to activate #73 when done))
	12	147.300	123.0	Grand Sierra Resort (Node #7873)
DMR		TALK GRPS		SNARS and/or NEVADA

Yellow highlighted are linked repeaters

Bob WA6MTY Emergency Coordinator Washoe County ARES
775 843-5952 wa6mty@gbis.com



Board of Directors Meeting Minutes

November 13, 2019 - 6:00 PM

Chin Chin, 222 Los Altos Pkwy, Sparks

1. Call to order and roll call at 6:00 PM

Anthony Marcin, W7XM	NP	Barry Bettman, K6ST	P	John Miller, N7JDM	P
Bill Jones, AE7OX	P	John Byerly, N7ROJ	P	Wes Vick, KG7QXE	P
Jim Shepherd, W6US	P	Doug Edmondo	P	Bill Nichols, NN7K	P

2. Approval of minutes

- A. Approval of the minutes. Approved as is
- B. Approval of Agenda. Approved

3. Reports

A. President's Report

- 1. So far 32% of membership has voted, one person needs paper ballot. Need to send a reminder

B. Secretary Report

- 1. Status Report – No report

C. Membership Coordinator

- 1. Membership Status – Kudos to Kim for keeping up with membership duties.

D. Treasurer

- 1. Financial Report. YTD income is \$1,703 with a net income of \$245
- 2. As of 11/13 - Checking: \$6,579 Savings: \$9,206 Paypal: \$790 Conv: \$4,295 Self-Ins: \$6,678
- 3. For the December 50/50 the board voted and approved 2 awards of \$100

E. Technical Team - Report

- 1. Status Report All good!

F. Control Operators / Trustee

- 2. Status Report - Control Operator and Trustee. Still need to have the control operator class

G. Events

H. Education Activities

1. Status Report
2. Youth involvement. Oct – JOTA, great event. Casey may speak at Dec. Meeting. 1st Sat in Jan is Kids day – looking at cabellas again. Addedd “Youth” tab on the web site. Working with Rod Case at UNR to reboot the UNR radio club.

I. Noon Net

1. Status Report - Net Manager. Okay – working on getting more operators involved.

J. New Business

1. eVoting 32% so far – tested to ensure you can't vote twice (Passed) Minimal (2) E-mails bounced and will send out two reminders to vote.
2. NVQSO – Great bump in participation, Jim will post numbers. Noted contributions and help from K3CT John Bender N1MM. W3KM Dave Mascaro for scoring program and Wa7BNN Bruce Horn for WEB to cabrillo.

K. Public Comments

1. Open for comments from the board of directors or the general membership and guests in attendance.
No comments were made

L. Adjournment of the board of directors

1. Next Meeting: 11 December 2019 at Chin Chin
2. Call for Adjournment. Board Adjourned.